



Education is action.
Build a sustainable future.



**University
of Victoria**

Since its inception almost a half century ago, the University of Victoria has committed to responsible resource use, protection of natural areas and a pedestrian oriented campus. Over the decades, UVic has developed nationally renowned programs relating to the sustainability of natural and social environments. Today, in a world in which the most challenging problems around sustainability are shared and co-operative international solutions are required, the university remains committed to taking action.

As a centre for learning and innovation that supports knowledge creation and transfer, UVic is uniquely positioned to be a leader in sustainability. Our world-class teachers and researchers are examining sustainability in business models, climate change solutions, restoration of natural systems, community planning, and renewable energy resources. Sustainability is integrated into all our academic disciplines. We are redesigning existing courses to include elements of sustainability and developing new courses, programs and experiential learning opportunities that address the challenge of meeting human needs now and into the future without compromising our natural environment.

In Spring 2009 UVic formalized its well-established commitment to sustainability with a Board approved Campus Sustainability Policy. It is a formal framework that sets out our commitment to stewarding the university's physical and financial resources in a responsible and sustainable fashion, educating all members of the university community, and working toward a sustainable future in cooperation with organizations at the local, provincial, national and global level. We continue to grow our programs of sustainability to further support our students, faculty and researchers who are seeking to make a positive difference through advanced education.

We recognize that our students are the leaders of future generations and invite you to join our faculty and staff in exploring and ensuring a more sustainable future.



Jamie Cassels,
Vice President Academic and Provost



Gayle Gorrill,
Vice President Finance and Operations



What is sustainability and why is it important?

You have heard the terminology: reuse, recycle, go green,
environmentally friendly, energy efficient, sustainable!
What does it all mean?

At UVic sustainability is defined as the state of concurrently achieving three key elements: the ecological balance that allows social development and economic prosperity to be achieved across generations.

- **Ecological Balance** is the equilibrium between, and coexistence of, all organisms and their environment.
- **Social Development** encompasses a commitment to create social opportunities for individuals and groups to enhance overall community well-being.
- **Economic Prosperity** is a financially healthy state.

These three elements are commonly referred to as the "triple bottom line" and in decision-making each is considered in a comprehensive and integrated manner.

Why should global sustainability efforts be important to you?

A sustainable future is in the hands and minds of you and your classmates. At UVic, we recognize that we have both a role and a responsibility to respond and take action. Come and explore the path to sustainability and your future through a full range of courses, programs and research and community based experience opportunities.

UVic accepts the sustainability challenge and leads the charge

At the University of Victoria we strive to model sustainability -- applying ingenuity to find new and creative solutions and practices that can serve as examples for others. UVic's Strategic Plan, "A Vision for the Future — Building on Strength", calls for the establishment of a formal framework to manage the university's physical and financial resources in a sustainable manner—that is, with attention paid to the "triple bottom line" of economic, social and environmental consequences. In March 2009, UVic formalized its well established commitment to sustainability with approval by the Board of Governors of a new campus sustainability policy. The policy outlines our commitment to integrating sustainability into our teaching, research, community partnerships and campus operations.

DID YOU KNOW ?

LEED (Leadership in Energy and Environmental Design) is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high-performance green buildings.



We walk our talk

- In 2008, UVic tied for the second-highest Canadian ranking in a US report that grades North American universities and colleges on their sustainability activities.
- **LEED gold status for our new buildings:** Medical Sciences, Engineering/Computer Science, Administrative Services and Social Sciences and Mathematics
- UVic encourages alternative and more efficient transportation to reduce pollution and greenhouse gases:
 - **SPOKES:** bicycle bursary program, recipients get a refurbished bike, lock and free cycling maintenance workshops | web.uvic.ca/sustainability/SPOKES.htm
 - **Universal Bus Pass** available to all students through the University Students' Society | www.stas.uvic.ca/photoid/studentcards
 - **Rideshare permits & Car-pooling** priority when three or more participants share a vehicle | web.uvic.ca/security/parking/index.html
 - **Car share** for families | www.housing.uvic.ca/family/fhguide.php
- **Day-to-Day Operations**
 - Campus food outlets serve a variety of certified fair trade products
 - Purchasing of local goods and services has increased, including locally produced foods in campus food outlets
 - In January 2008, UVic became the first university in BC to commit to using 100 per cent recycled paper stock across campus
 - All student computer labs use double-sided copying by default
 - Water Reuse Initiative saves over 4.5 million litres of potable water each year
 - All food waste from food outlets on campus is composted



Are you thinking of a “green” career?

With growing worldwide consciousness of human ecological impact, a new generation of green professionals will be our stewards for a sustainable planet. Here are some of the hottest green careers in the country (according to ECO Canada¹), and how you can prepare for them here at UVic.

DID YOU KNOW ?

UVic offers more than 200 courses related to sustainability across the faculties.

For a list of courses, check out uvic.ca/sustainability/teaching.php.

¹ - ECO Canada is one of about 30 sector councils established with federal startup funding to bring employers, workers, educators, and governments together to address human resource challenges facing the Canadian economy.

Career Paths

▶ ENVIRONMENTAL ENGINEERING

Plan, design or supervise industrial components and processes to ensure they are sustainable and comply with environmental policies and guidelines. Develop sustainable sources of energy.

Related Programs

- Bachelor of Engineering in Electrical and Computer or Mechanical*
- Bachelor of Science in Computer Science*
- Bachelor of Software Engineering*
- BEng and BEng Technology Policy Option (elective courses focus on sustainability & environmental assessment*)

www.engr.uvic.ca

Sample of Course Related to Programs

- **ENGR 297:** Technology and Society
- **ENGR 400:** Sustainable Energy Systems Design Project
- **GEOG 101A:** Biophysical Systems & the Human Environment
- **ES 314/Phil 333:** Philosophy and the Environment
- **ES 312/ECON 380:** Environment Economics
- **SOCI 465:** Environmental Sociology

▶ GEOGRAPHY RELATED CAREERS

Geographic Information Systems (GIS) Analyst | Rural, urban, or transportation planner
Environmental policy or planning analyst

Related Programs

- Bachelor of Arts in Geography* (combined programs available in Earth Sciences, Education, and Environmental Studies)
- Bachelor of Science – Geomatics Program (a major degree joint program by departments of Geography and Computer Science)
- Public Administration* (minor, diploma, masters)

Sample of Course Related to Programs

- **GEOG 101A:** Environment, Society & Sustainability
- **GEOG 209:** Introduction to Resource Management
- **GEOG 343:** Planning & Urban Development
- **GEOG 346:** Geography, Environment and Health
- **GEOG 357:** Protected Areas: Principles & Concepts
- **GEOG 375:** Forest Resource Management
- **GEOG 222:** Map and Air Photo Interpretation
- **GEOG 228/SENG 265:** Digital Geomatics
- **GEOG 319:** Physical Principles of Remote Sensing
- **GEOG 328/329:** GIS for Natural or Social Sciences
- **ADMN 312:** Managing in Public and Non-profit Organizations
- **ADMN 420:** The Public Policy Process

www.geog.uvic.ca | www.geog.uvic.ca/geomatics | publicadmin.uvic.ca

▶ BUSINESS

Sustainable management

Related Programs

- Bachelor of Commerce*
- Sustainability Entrepreneurship Module

Sample of Course Related to Programs

- **COM 362:** Decision-Making for Responsible and Sustainable Global Business
- **IB 409:** Global and Local Sustainability
- **COM 450:** Corporate Relations and Responsibilities
- **IB 301:** International Business Environment

www.business.uvic.ca | www.business.uvic.ca/discover/thinking/student/bcom

▶ BIOLOGY AND ENVIRONMENT RELATED CAREERS

Protect and restore biodiversity and minimize human impacts on the natural world: biology or ecology conservation, environmental conservation, restoration specialist.

Related Programs

- Bachelor of Science in Biology*
- Environmental Studies* (Major or Minor combined with another area of study)
- Restoration of Natural Resources (interdisciplinary program designed for those interested in the emerging field of environmental restoration and professionals)

Sample of Course Related to Programs

- **BIOL 215:** Principles of Ecology
- **BIOL 319:** Marine Biology
- **BIOL 334:** Plants and People
- **BIOL 370:** Conservation Biology
- **BIOL 401A:** Biotechnology
- **ES 341:** Ecological Restoration
- **ES 402:** Global Issues in Sustainability
- **ES 418:** Environmental Law: Policy and Legislation
- **ES 446:** Sustainable Fisheries
- **ES 461:** Environmental Impact Assessment
- **ER311:** Principles and Concepts of Ecological Restoration
- **ER 313:** Biodiversity and Conservation Biology
- **ER 314:** Ethical, Legal, and Policy Aspects of Environmental Restoration

web.uvic.ca/biology | web.uvic.ca/enweb | www.uvcs.uvic.ca/restore

▶ CLIMATE CHANGE AND RESEARCH SCIENTIST CLIMATOLOGIST/ENVIRONMENTAL METEOROLOGIST

Work on climate change solutions, adaptation and mitigation in a wide variety of settings: academic, government-sponsored, industrial, agricultural and fishing – often interdisciplinary backgrounds.

Related Programs

- Bachelor of Science degree in Earth & Ocean Science*
- Human Dimensions in Climate Change (an interdisciplinary minor)

Sample of Course Related to Programs

- **EOS 170:** Natural Hazards
- **EOS 350:** Understanding the World's Oceans
- **EOS 365:** Climate and Society
- **EOS 420:** Resource Geology
- **EOS 433:** The Climate System
- **GOEG 110:** Oceans and Atmosphere
- **GEOG 120:** The Dynamic Earth
- **ECON 383/GEOG 314:** Climate Economics
- **HDCC 200 & 400:** Introduction and Seminar in the Human Dimensions of Climate Change

seos.uvic.ca | www.pics.uvic.ca | web.uvic.ca/calendar2009/FACS/InPr/HDofCC.html

▶ ENVIRONMENTAL LAW

Related Programs

- Bachelor of Arts or Bachelor of Science with a major or minor in Environmental Studies
- Bachelor of Laws*

www.law.uvic.ca

Sample of Course Related to Programs

- **ES 419/Law 328:** Environmental Law
- **Law 353:** Environmental Law Centre Clinic

* denotes co-operative education opportunity



Sustainability from a student perspective



Patricio Lillo is on a quest to renew himself by contributing to a renewable energy source.

As an industrial engineer in Chile, he spent five years designing and optimizing mining processes for several large mining companies and another two years as a university professor and mining consultant. Over time, he became disenchanted with mining in Chile with its limited pollution control standards. He says, "I woke up one night and realized that tons of greenhouse gas emissions from my activities were causing great damage to the world."

In 2007 Lillo quit his position, came to Canada and start working in the renewable energy field. Now enrolled in a master's degree in mechanical engineering, he is part of a multi-disciplinary team led by Dr. Curran Crawford at UVic's Institute for Integrated Energy Systems. The team is researching structural analysis of wind turbine blades subjected to cold temperatures. Lillo says, "Since 2003, renewable energy has become very important in Chile because it no longer wants to depend on other countries for fuel. Right now, Chile is building one of the world's largest wind farms which will produce 500 megawatts — enough electricity for 100,000 homes."

“ One of the best moments was when a group of delegates told us the summit was a life-changing experience. ”

- Jill Doucette



“ I loved interacting with the middle school students, and it was great to see them become excited about protecting the environment. ”

- Ashley Hamilton



Jill Doucette has tucked away some unforgettable memories as co-chair

of the 2009 World Student Environmental Summit held at UVic. “One of the best was when a group of delegates told us the summit was a life-changing experience,” recalls Doucette (biology and environmental studies). The co-chairs felt that student leaders left the summit understanding that students can act as change agents at their universities.

No stranger to environmental issues, Doucette won top honours in March 2009 at the national Nicol Entrepreneurship competition for her green business consulting practice known as Synergy. Her business helps the coffee, restaurant and retail industries implement sustainable business practices, offering a range of services including greenhouse gas inventories, energy audits, green energy products and waste management systems. Doucette also advises clients on how to integrate green ideas into their business strategy and access appropriate environmental funding programs and grants.

Ashley Hamilton fell in love with geography.

She says “I felt really empowered and I wanted to make a difference after taking Geography 214: Environmental Change and Human Response.” An outdoors enthusiast, Hamilton became involved with the Victoria Sierra Club, as well as Enviro 911, a group that discusses solutions to urban sprawl, air pollution, and other environmental factors. She felt lucky to get a Co-op work term with City Green, a not-for-profit organization that partners with various levels of government, business, and community organizations to promote environmental sustainability in Greater Victoria. Hamilton was hired to investigate how the organization could educate middle school children about climate change. She developed a few lesson plans and tested them on visits to four Victoria middle schools. “I’ve always been interested in blending environmental awareness and education,” says Hamilton. “I’d worked at a few summer camps, so I had some ideas of how to make this fun for kids. I loved interacting with the students, and it was great to see them become excited about protecting the environment.”

“ I want to regain the ecological knowledge the Salish people used for many centuries to stay in balance with nature. ”

- Leigh Joseph

“ I found the hands-on experience combined with my GIS courses gave me a unique skill set. ”

- Hilary Harrop-Archibald



DID YOU KNOW ?

Dr. Turner teaches:

ES 200: Introduction to Environmental Studies

ES 321: Ethnoecology

ES 381: Environmental Topics:
Topics in Ethnoecology

ES 421: Ethnobotany: Plants and Human Cultures

ES 423: Traditional Systems of Land
and Resource Management



Leigh Joseph, a member of the Squamish Nation (Coast Salish), is rediscovering traditional knowledge that she hopes will help her culture. A love of the outdoors led her to take a double major in biology and environmental studies at UVic. “Ethnobotany was a natural draw for me because I wanted to learn more about my community’s traditional uses of plants.” The introductory course, ES200, opened her eyes to the disconnect between the food we eat and the knowledge of where it comes from and how it’s grown. She is grateful to **Dr. Nancy Turner**, a world-renown expert in ethnoecology, for giving her advice and contacts that resulted in “some amazing experiences.” Joseph’s first field work was with the Kingcome community (Tsawataineuk First Nation) and Abe Lloyd, UVic graduate student, in a project to measure the productivity of four traditional root crops grown on estuary flats. Joseph says, “It was incredible to be part of this harvest, the first time it has happened in more than 75 years.” Now more aware of how quickly cultural knowledge can be lost, her interest has turned to traditional medicinal uses of plants. “I want to regain the ecological knowledge the Salish people used for many centuries to stay in balance with nature.”

“I really liked the positive philosophy behind the interdisciplinary Restoration of Natural Systems

(RNS) program and that’s why I ended up at UVic,” says Hilary Harrop-Archibald. With a strong interest in field work, she found the RNS certificate courses were a good fit with her UVic BSc in geography. “I found the hands-on experience combined with my GIS [geographic information system] courses gave me a unique skill set,” she says.

Harrop-Archibald’s enthusiasm for environmental sustainability led her to work on a Masters degree on alternative silviculture that increases the structural complexity and species diversity of second growth forests. Her interests also resulted in contract work with both the provincial government and UVic’s Office of Sustainability. To create a baseline for UVic’s campus sustainability initiatives, she was asked to carry out an ecological survey and inventory of introduced tree species for the campus. She says she has received “exceptional support” from the Department of Geography Department when taking on unusual projects. “I appreciate the opportunities for networking at UVic and I love what I do.”

DID YOU KNOW ?

Have you seen UVic's Interactive Community Green Map?
Visit <http://mapping.uvic.ca/?q=geobrowser>

“ I feel certain that real estate is one of the best ways to move towards sustainability because property development affects so many people. ”

- Heather Weberg



UVic students are garnering praise for their more environmentally sustainable car.

UVic's EcoCar team placed second overall and won several other top awards in 2009 for its first year of a three-year competition to design and integrate leading-edge technology into a 2009 Saturn VUE. The goal of North American teams is to reduce the vehicle's environmental impact while maintaining its utility and user appeal. Among UVic's seven trophies was first place for technical reports and three "bests" for electrical systems presentation, modelling and media relations.

The team is made up of four mechanical engineering students and an undergraduate in electrical and computer engineering. Team leader Jeremy Wise is supported by assistant team leader Daniel Prescott, technical leader Leon Zhou, business leader Shayan Rahimi and reports manager Tiffany Jaster. The team is guided by faculty advisors Dr. Zuomin Dong and Dr. Curran Crawford. "We were pretty excited to almost catch Ohio State University, especially as they have more than 15 years of participation in this green vehicle competition," says Wise.



Inspired by UVic's business course, "Decision Making for Global Business," Heather Weberg was convinced sustainability and the real estate business could be linked.

Selected for the Business Co-op Student of the Year award in 2008, Weberg credits her co-op work term at Victoria's Jawl Development Corporation for giving her first-hand knowledge of the real estate industry while contributing to sustainability initiatives. She was hired to design and implement an energy awareness program for the company's more than 60 commercial tenants. "I tried to get across that every little bit makes a big difference," says Weberg. "It all adds up, even if just one person turns off the lights when they leave a room." Her Tenant Energy Awareness Program focused on energy conservation, alternate transportation, water conservation and waste reduction. It featured email tips, newsletters and posters, sample workstation audits, suggestion boxes, a practical "how-to" program and luncheon speakers.

Now employed by BC Assessment's Sea to Sky office, Weberg says, "I feel certain that real estate is one of the best ways to move towards sustainability because property development affects so many people," she says.



Exciting new learning opportunities

A new field school

Through a unique partnership between UVic's School of Environmental Studies, Green Learning, and Pearson College students can now have an intensive field school experience of a life time at the Redfish School of Change! The Redfish School of Change is designed for people who want to lead the way in creating ecological sustainability and social equity in their communities.

Upon successful completion of the Redfish School of Change, you will be awarded 4.5 units of course credit for the three UVic courses:

- ES 200: Introduction to Environmental Studies
- ES 240: Ecological Processes
- ES 270: Leadership Skills for Community Action

As a participant in this intensive six-week field school, you travel from the mountains of the Slocan Valley to the marine coast of southern Vancouver Island. You visit innovative sites and engage with experts in the field of environmental and social justice. You explore the wilderness of Valhalla Provincial Park, and witness the changing nature of the Fraser River as we paddle from Hope to Vancouver. You learn critical skills for creating positive change, putting them into practice during and after this unique program.

“ Hands-on field based learning bears witness to effective social and ecological change. It's a powerful way to learn. ”

- Eric Higgs, Director of the School of Environmental Studies

A new minor in the human dimensions of climate change

UVic's Faculty of Social Sciences is excited to be offering a new interdisciplinary Minor in the Human Dimensions of Climate Change available January 2010. This program will provide students with a thorough understanding of the human aspects of climate change, including its political, economic, geographic, psychological, and sociological dimensions together with an introduction to its physical aspects. Students may obtain this minor by completing the requisite units of coursework, together with an Honours, Major, or General program in any discipline. For more detailed information, see web.uvic.ca/calendar2009/FACS/InPr/index.html.

Courses include:

- **GEOG 110:** Oceans and Atmosphere
- **ECON 383:** Climate Economics
- **GEOG 314:** Global Environment Change and Human Response
- **EOS 365:** Climate and Society
- **HDCC 200:** Introduction to Human Dimensions of Climate Change
- **HDCC 400:** Seminar on Human Dimensions of Climate Change

DID YOU KNOW ?

Five UVic researchers, who served as members of the Intergovernmental Panel on Climate Change (IPCC), shared in the 2007 Nobel Peace Prize with Al Gore for "their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change."

“ The University of Victoria is already among the world's best-known locations for climate research, and the addition of this interdisciplinary minor... will complement its science-based expertise. ”

- Dr. Peter Keller, Dean of Social Sciences

Join other students

Contribute your ideas and talents to one of the many student-run and UVic-sponsored organizations working towards sustainability. For the full story, check out uvic.ca/sustainability/getinvolved.php. Here are some of the organizations you can choose from:

- **Common Energy:** a network of students, staff, faculty members and regional partners that is working on finding solutions to climate change.
- **UVic Sustainability Project (UVSP):** a student-run organization that works with the campus community to strive to achieve a balance between what is ecologically necessary, socially desirable and economically feasible at UVic.
- **GoBEYOND:** a province-wide campaign to move students and institutions beyond climate-neutral. Take the goBEYOND Challenge -- a viral challenge to go beyond climate-neutral in your own life.
- **UVic Community Green Map:** part of the locally-led Green Map projects that act as comprehensive inventories for decision-making. Join over 50 students who are charting UVic's green living, ecological, social and cultural resources.
- **Residence Sustainability Team:** join the team if you live on campus in family, cluster or dormitory housing and have the passion to change yourself, think outside the box, and educate your peers.
- **UVSS Environmental Responsibility Committee:** investigates environmental and social issues; connected to the national Students for Sustainability initiative
- **UVic campus community gardens:** students manage 6 communal plots and rent 45 individual plots to UVic community members. Several large plots supply the campus pocket market and local food bank.
- **Pocket Market:** held every Thursday 10 a.m.-2 p.m. at the Student Union Building, it provides a way to support local, sustainable agriculture.
- **UVic Business Sustainability Club:** launched its first initiative in March 2008 to raise awareness about bottled water. Open to all students in the Faculty of Business, the club believes in implementing change through action.

WEBSITES

UVic sites

Co-operative Education Program and Career Services

www.uvic.ca/coop
www.careerservices.uvic.ca

Campus “green” buildings

www.uvic.ca/buildings/cab.html

Pacific Institute for Climate Solutions

www.pics.uvic.ca

Sustainability courses

web.uvic.ca/sustainability/teaching.php

Sustainability policy

web.uvic.ca/sustainability/CampusSustainabilityPolicy.htm

Sustainability website

web.uvic.ca/sustainability

Undergraduate sustainability courses in business

www.business.uvic.ca/green/courses/bcom

UVSP – students committed to creation of a sustainable campus and community

uvsp.uvic.ca/index.htm

Research Centres

www.uvic.ca/research/researchcentres.htm



**University
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Other sustainability sites

A guide to environmental directories,
portals and networks in Canada

www.planetfriendly.net/greengateways.html

Common Energy

www.commonenergy.org

David Suzuki Foundation

www.davidsuzuki.org/

Environment Canada

www.ec.gc.ca

GoBeyond Challenge

www.go-beyond.ca/index

International Institute for
Sustainable Development

www.iisd.org

Natural Resources Canada

(climate change impact and adaptation)

www.adaptation.rncan.gc.ca

Sierra Club of BC

www.sierraclub.bc.ca

